

an elongated core having first and second ends, said elongated core being formed of a substantially rigid material;

an elongated sleeve having an embossing pattern formed thereon, said elongated sleeve being formed of a material which is less rigid than said core with said embossing pattern including embossing elements having at least one of curvilinear side walls, spherical surfaces and multiple elevations with respect to a reference surface; and

(concluded)

a positioning means for selectively positioning said sleeve with respect to said core, said positioning means including at least one axially extending bore, a plurality of radially extending passages intersecting said axially extending bore, a circumferential groove formed in a surface of said core interconnecting said radially extending passages formed in said core for selectively communicating pressurized air to said surface of said core with said sleeve being formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core and an axially extending slot in an outer surface of said elongated core and an axially extending key extending from an inner surface of said elongated sleeve, said key being received in said slot for rotationally positioning said sleeve with respect to said core;

wherein said elongated sleeve is releasably secured to said core such that said elongated sleeve is axially and circumferentially fixed with respect to said core when in operation and can be selectively axially removed from said core.

33. (Four Times Amended) A system for embossing a substantially continuous web of material comprising:

a supply means for supplying at least one substantially continuous web of material;

feed means for feeding said substantially continuous web of material;

embossing means for embossing a predetermined pattern in said web material; and

a take-up means for taking-up said web material;

said embossing means comprising;

at least one elongated core formed of a substantially rigid material; and

a plurality of elongated sleeves each having an embossing pattern formed thereon with said embossing pattern including embossing elements having at least one of curvilinear side walls, spherical surfaces and multiple elevations with respect to a reference surface;

a positioning means for selectively positioning said sleeve with respect to said core, said positioning means including at least one axially extending bore, plurality of radially extending passages intersecting said axially extending bore, a circumferential groove formed in a surface of said core intersecting each of said plurality of radially extending passages formed in said core for selectively communicating pressurized air to said surface of said core, said sleeve being formed of an expandable material such that when pressurized air is passed to said surface of

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said core, said sleeve expands so as to be displaceable with respect to said core and an axially extending slot in an outer surface of said elongated core and an axially extending key extending from an inner surface of said elongated sleeve, said key being received in said slot for rotationally positioning said sleeve with respect to said core;

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wherein said plurality of elongated sleeves are interchangeable with one another with each of said plurality of elongated sleeves being selectively secured to said core in accordance with the predetermined embossing pattern formed thereon.

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53. (Four Times Amended) A system for embossing a substantially continuous web of material comprising:

a supply means for supplying at least one substantially continuous web of material;

feed means for feeding said substantially continuous web of material;

embossing means for embossing a predetermined pattern in said web material; and

a take-up means for taking-up said web material;

wherein at least one roll of the system includes;

an elongated core formed of a substantially rigid material;

an elongated sleeve formed of a material less rigid than said elongated core with said elongated sleeve being releasably secured to said core such that said

elongated sleeve is axially and circumferentially fixed with respect to said core when in operation and can be selectively axially removed from said core; and

a positioning means for selectively positioning said sleeve with respect to said core, said positioning means including at least one axially extending bore, plurality of radially extending passages intersecting said axially extending bore, a circumferential groove formed in a surface of said core intersecting each of said plurality of radially extending passages formed in said core for selectively communicating pressurized air to said surface of said core and an axially extending slot in an outer surface of said elongated core and an axially extending key extending from an inner surface of said elongated sleeve, said key being received in said slot for rotationally positioning said sleeve with respect to said core;

wherein said sleeve is formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core and said sleeve includes an embossing pattern, and said embossing pattern including embossing elements having at least one of curvilinear side walls, spherical surfaces and multiple elevations with respect to a reference surface.

75. (Amended) In an embossing apparatus for embossing a substantially continuous web of sheet material, an embossing roll comprising:

an elongated core having first and second ends, said elongated core being formed of a substantially rigid material;

an elongated sleeve having an embossing pattern formed thereon, said elongated sleeve being formed of a material which is less rigid than said core with

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(continued)

said embossing pattern including embossing elements having at least one of curvilinear side walls, spherical surfaces and multiple elevations with respect to a reference surface; and

a positioning means for selectively positioning said sleeve with respect to said core, said positioning means including at least one axially extending bore, a plurality of radially extending passages intersecting said axially extending bore a circumferential groove formed in a surface of said core interconnecting said radially extending passages formed in said core for selectively communicating pressurized air to said surface of said core with said sleeve being formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core;

wherein said elongated sleeve is releaseably secured to said core such that said elongated sleeve is axially and circumferentially fixed with respect to said core when in operation and can be selectively axially removed from said core.

76. (Amended) A system for embossing a substantially continuous web of material comprising:

a supply means for supplying at least one substantially continuous web of material;

feed means for feeding said substantially continuous web of material;

embossing means for embossing a predetermined pattern in said web material; and

a take-up means for taking-up said web material;
said embossing means comprising;
at least one elongated core formed of a substantially rigid material;
and

a plurality of elongated sleeves each having an embossing pattern formed thereon with said embossing pattern including embossing elements having at least one of curvilinear side walls, spherical surfaces and multiple elevations with respect to a reference surface;

a positioning means for selectively positioning said sleeve with respect to said core, said positioning means including at least one axially extending bore, plurality of radially extending passages intersecting said axially extending bore a circumferential groove formed in a surface of said core intersecting each of said plurality of radially extending passages formed in said core for selectively communicating pressurized air to said surface of said core, said sleeve being formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core

wherein said plurality of elongated sleeves are interchangeable with one another with each of said plurality of elongated sleeves being selectively secured to said core in accordance with the predetermined embossing pattern formed thereon.

77. (Amended) A system for embossing a substantially continuous web of material comprising:

a supply means for supplying at least one substantially continuous web of material;

feed means for feeding said substantially continuous web of material;

embossing means for embossing a predetermined pattern in said web material; and

a take-up means for taking-up said web material;

wherein at least one roll of the system includes;

an elongated core formed of a substantially rigid material;

an elongated sleeve formed of a material less rigid than said elongated core with said elongated sleeve being releaseably secured to said core such that said elongated sleeve is axially and circumferentially fixed with respect to said core when in operation and can be selectively axially removed from said core; and

a positioning means for selectively positioning said sleeve with respect to said core, said positioning means including at least one axially extending bore, plurality of radially extending passages intersecting said axially extending bore a circumferential groove formed in a surface of said core intersecting each of said plurality of radially extending passages formed in said core for selectively communicating pressurized air to said surface of said core; and

wherein said sleeve is formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core and said sleeve includes an embossing pattern, and said embossing pattern including embossing elements having at least one of curvilinear side walls, spherical surfaces and multiple elevations with respect to a reference surface.